

Bulletin of the Oregon Entomological Society

A Collecting Trip in the Ochocos

Trevor McNeese

I have been going on collecting trips throughout Oregon ever since I was four years old. We have gone a lot of places hunting for butterflies, but the Ochocos are one of our favorite places to go.

When we went on this trip we were focused on collecting *Colias occidentalis* (Western Sulphur) and *Erebia epipsodea* (Butler's Alpine) but I never knew I would catch a *Boloria selene* (Silver-bordered Fritillary). We were driving down NFR 2610 in Crook County when I told my Dad (Dave McNeese) to stop the car. Because I had spotted an Alpine, I ran from our SUV and caught it. We were thrilled because it was one of our target butterflies. Afterwards MacKenzie and I went to a small nearby creek to look for Oregon spotted frogs (*Rana pretiosa* which is a threatened species) but didn't find any. I was walking back when I saw a certain butterfly which stood out to me although it looked like the rest. I wanted to catch this one, so I ran over and after chasing it a bit I finally caught it. When I took it back to our SUV, Dad

thought it was just a common *Boloria epithore* (Western Meadow Fritillary) and he released it. The *Boloria* landed on a bush and after looking at it he realized it was a *Boloria selene*, which made our trip.

I have been catching butterflies, moths, and beetles for nine years, but I never thought I would catch something so rare. I'm Trevor McNeese 13 years of age and I'm happy to share my story.



Boloria selene (Silver-bordered Fritillary) collected by Trevor McNeese on June 7, 2018 along Little Hay Creek Road (NFR 2610, east off of Highway 26 about 20 miles east of Prineville), Crook County, Oregon. Photo by Dave McNeese.



MacKenzie and Trevor McNeese at the big pine on upper Little Hay Creek Road (NFR 2610). Photo by Dave McNeese.

Feel free to distribute this newsletter to others.

Submit content to **Ron Lyons** <pondhawk@uci.net>. To be included on the distribution list contact **Jim Johnson** <gomphusjim@google.com>.

Publication of Pacific Northwest Insects, A New Field Guide Merrill Peterson

After working for the past fourteen years on this photographic field guide, I am excited to announce that my book, Pacific Northwest Insects, has now been published (Seattle Audubon Society, 528 p.). The book contains detailed accounts of more than 1,225 featured species, each with a beautiful photograph of a living individual and information that allows not only identification of that species but of similar species as well. As a result, the grand total of species that can be accurately identified using the book comes to more than 3,000.

The book covers all of Oregon, as well as northern California (from the Bay Area northward), Washington, southern British Columbia, Idaho and western Montana. The book also covers all the insect orders in the region as well as ticks and mites, spiders, harvestmen, scorpions, pseudoscorpions, windscorpions, symphylans, pauropodans, centipedes, millipedes and woodlice.

Each species account also includes size variation, seasonality, and habitat and distribution. The book also features informative essays on each of the major groups, as well as detailed and accurate line drawings showing the important anatomical features for identifying species.

It was a huge project—much bigger than I had ever imagined when I started. In order to provide the details to make accurate identification possible for so many species, I had to take thousands of photographs, scour countless articles in the entomological literature, as well as study hundreds of thousands of insect specimens at regional collections. By the time it was finished, I'd invested at least 10,000 hours of work and 30,000 miles of driving in the project. To ensure that the accounts were as accurate as

possible, I had more than 70 entomological specialists review sections of the book.

Probably the coolest thing that came out of writing the book was making some discoveries literally in my own backyard. I live in Bellingham, Washington, pretty close to the downtown area. So I was surprised to find the first population of *Gilpinia hercyniae*, an invasive sawfly species previously known only from eastern North America, where it has been a forest pest. Also in my backyard, I became the first to photograph a live *Oecophora bractella*, a beautiful little micromoth that had apparently just begun to invade the region from Europe where it is on several countries' lists of species of conservation concern.

My hope is that the book helps some of the many people who through their professions or hobbies have need for accurate entomological identification. But I also hope that it helps all different kinds of people to appreciate insects, by giving them the tools with which to identify and understand this huge part of the world around them.

Pacific Northwest Insects can be purchased at all the usual places, including Amazon, your local independent bookstore, or the University of Washington Press which is the US distributor for the book.



LEAF BEETLES (CHRYSOMELIDAE)

St. Johnswort Beetle
Chrysolina hyperici (SWARZEN)

DESCRIPTION: Round, domed, metallic green to bronze body often has green head and pronotum with bronze elytra; elytra each with several double rows of large punctures; additional fine punctures on elytra are larger than punctures on pronotum.
PNW DISTRIBUTION: Region-wide. Released to control Amaranth Weed in the 1940s. May-Oct. Introduced.
SIMILAR SPECIES: *C. quadrigemina* is larger (8mm-71 mm), has more polished finish, and has fine punctures on elytra similar in size to those on pronotum. *C. banksi* (SF Bay area (CA)) has reddish appendages.

Common Willow Calligrapha
Calligrapha multipunctata (SW)

DESCRIPTION: Round, domed body; black head; pronotum black with creamy side and front margin; creamy-yellow elytra have black stripe on suture, shorter, parallel, black stripe to either side, and many scattered black spots of various shapes; legs and antennae reddish.
PNW DISTRIBUTION: Region-wide. Adults and larvae feed on willow leaves. Apr-Oct.
SIMILAR SPECIES: *C. phalaenopsis* has pronotum entirely black and elytra with red on suture. *C. sigmoides* has black appendages, suture stripe fused to adjacent stripes, and each elytron with extra pair of curved, black lines. *C. venosella* has orange. No shaped mark on pronotum and elytra with red suture stripe.

Tibetan Leaf Beetle
Calligrapha californica (SW)

DESCRIPTION: Black head; pronotum pale yellow to red with dark spots that may be joined into zigzag band; elytra pale yellow with 3 broad stripes the outer stripes may be broken, as shown.
PNW DISTRIBUTION: Region-wide. Feeds on begonia, tobacco, tobacco, and other related plants. Apr-Sep.
SIMILAR SPECIES: *Chrysomela* spp. have examples on p.270 have narrower body and 5 stripes on elytra.

Colorado Potato Beetle
Leptinotera decemlineata (SW)

DESCRIPTION: Round, domed body; head and pronotum orange and black; pronotum with 10-16 black spots; elytra creamy-yellow or orange with 11 black stripes; legs orange except for tarsi and whole femora and tibiae meet.
PNW DISTRIBUTION: SE BC, E WA, NE OR, ID, W MT. Feeds on leaves of potatoes, peppers, eggplants, nightshades, and related plants. Overwinters as an adult but mainly seen Apr-Sep. Introduced.
SIMILAR SPECIES: *Agopogon* exclamationis (SD) lacks spots on pronotum, lacks stripe on outer margin of elytra, and has its subventral stripe on elytra divided into exclamation point.

LEAF BEETLES (CHRYSOMELIDAE)

Willow Leaf Beetle
Chrysomela aeneicollis (SCHWARZEN)

DESCRIPTION: Reddish-orange (sometimes creamy-yellow) elytra with dark markings varying from being nearly absent to covering almost entire surface of elytra; head and pronotum black.
PNW DISTRIBUTION: Region-wide in moist, forested areas. Adults and larvae feed on leaves of willows and aspens. Jun-Aug.
SIMILAR SPECIES: *C. fallax*, which occurs to the N of our area encompasses the range of *C. aeneicollis* in BC. Usually has pale outer margins on pronotum. *C. mainensis* (below) has pale outer margins of pronotum and feeds on alder leaves.

No Common Name
Chrysomela mainensis (SW)

DESCRIPTION: Reddish-orange (sometimes creamy-yellow) elytra, each with pair of dark markings (often fused) near "shoulders," another pair near middle, and additional markings that together form "C" shaped mark near base; these markings may have green tinge; pronotum black at middle with pale outer edges; caudal populations have dark markings covering most of elytra.
PNW DISTRIBUTION: Region-wide. Adults and larvae feed on alder leaves. Apr-Jun.
SIMILAR SPECIES: *C. fallax* (BC) only feeds on poplars and willows. *C. aeneicollis* (above) also feeds on willows and has dark outer margins of pronotum.

Cottonwood Leaf Beetle
Chrysomela scripta (SW)

DESCRIPTION: Creamy-yellow elytra each with black dot near scutellum, another spot near each to, pair of black lines near middle, and black line along outer margin that is usually broken into 3 segments; pronotum black in middle with orange outer margins; head black.
PNW DISTRIBUTION: Region-wide. Adults and larvae feed on leaves of cottonwoods, poplars, and willows. Apr-Aug.
SIMILAR SPECIES: *C. cinnerea* has long line at middle of each elytron much thicker than in *C. scripta*. *C. inaequalis* has shorter, thicker lines on elytra. *C. confinis* has thicker, sometimes fused, dark spots on elytra, and often blue green.

Goldenrod Leaf Beetle
Trirhabda canadensis (SW)

DESCRIPTION: Yellow, dull elytra have broad, black stripe down sides and on outer edges; shiny, yellow pronotum has 3 small, black spots; yellow head with larger dark spot in middle; scutellum black.
PNW DISTRIBUTION: Region-wide. Adults and larvae feed on leaves of goldenrods. Jul-Sep.
SIMILAR SPECIES: *T. bowalis* has larger spots on pronotum and black collar across rear part of head. Striped forms of *T. congeneris* also have black across rear part of head. Similar species that feed on other plants are *T. lewisii* and *T. ruficollis* both found on redbudbush and *T. fallax* (feeds on sagebrush). See also *Xanthogasterula fulvula* (next page).

Idionotus siskiyou (Siskiyou Shieldback)—A Katydid found in Southern Oregon (Orthoptera: Tettigoniidae)

Ron Lyons

For some time now I have been photographing the various species of katydids found in our area and supplying the images to Thomas Walker for the Singing Insects of North America website (<<http://entnemdept.ufl.edu/Walker/buzz/>>). Some of the pictures shown here are also on that website.

About 35 species of katydids have been found in Oregon, some of which are very recent additions. Of these, about 70% belong to the subfamily Tettigoniinae, commonly called the shield-backed katydids. Most of the species in this subfamily have an enlarged pronotum (the top sclerite of the first of the 3 thoracic segments) that extends back to cover the other thoracic segments, part of the wings, and sometimes part of the abdomen (Capinera et al. 2004). (The shape of this shield is reminiscent of some swept back bicycle helmets.) While most of these species are flightless—they develop wings, just not functional flight wings—a few species, such as, *Tessellana tessellata* (see Lyons 2012) and all the members of the genus *Capnobotes* (see Lyons 2011), can fly. Rentz and Birchim (1970 p. 8) stated that: “The life histories of most species are not well known.” The situation for our species hasn’t changed much

since then, in part because of their nocturnal habits and in some cases, apparently restricted distributions. Some genera still need to be revised.

Members of this family are predaceous, and/or supplement their diets with animal matter. Individuals of some species can be active on some roads at night as they look for and feed on insects, mainly dead and dying grasshoppers and katydids. Occasionally, females can be found trying to oviposit in the irregularities of the road surface.

Seven species have been described in the genus *Idionotus* (Rentz and Birchim 1970). Of these species, only one, *Idionotus siskiyou* (Siskiyou Shieldback, Figures 1–4), has a distribution known to extend outside of California. In California this species has a widespread distribution, encompassing much of the the northwest corner of the state (excludes Humboldt and Del Norte Counties at the moment). In Oregon it has been found along our southern border, in Josephine (Rentz and Birchim 1970) and Jackson Counties.



Figure 1: Female *Idionotus siskiyou* found along the Copco Road, Siskiyou County, California on July 26, 2010 about 10:40 pm. The female has a long extended ovipositor. Note the speckle pattern on its body. Photo by Ron Lyons.

Figure 2: Male *Idionotus siskiyou* photographed in Josephine County on Eight Dollar Mountain Road on August 21, 2014. The wings appear as the darker area at the posterior end of the shield. Compared to the female, the male looks truncated. From a distance, ovipositing females can sometimes appear truncated if the ovipositor is inserted deeply into the substrate. Photo by Ron Lyons.





Figure 3: Dorsal view of the end of the abdomen of the male pictured in Figure 2, showing the quadrate cerci. Photo by Ron Lyons.

Rentz and Birchim (1970) reported specimens from a number of California locations as well as two Oregon locations in Josephine County: Grants Pass, collected on 18-VII-1923, and Hayes Hill, collected on 15-VIII-1941.

I have photographic records from the following Oregon locations:
Jackson County: Highway 66 east of Ashland 2009 August 27–28
Jackson County: Siskiyou Summit Road 2010 August 12–13
Josephine County: Eight Dollar Mountain Road
2012 September 04–05
2012 September 13–14

2012 October 03–04

2014 August 21–22.

I also have photographs from the following California locations:

Siskiyou County: Copco Road 2010 July 26–27

Siskiyou County: Ager–Beswick Road 2010 August 04–05

Siskiyou County: Hwy 263 north of Yreka 2010 August 04–05.

Rentz and Birchim (1970) indicate that this katydid is mainly nocturnal but has been found active during the daytime. I have only encountered this species on quiet roads at night. All the records indicated above were obtained between 8:30 pm and midnight.

Species from three other genera of flightless shield-backed katydids can be found in the border area—*Idiostatus*, *Neduba* and *Steiroxys* (*Capnobotes* and *Tessellana* are also present but these can fly). Compared to the species in these genera, the quadrate cerci of the male of *Idionotus siskiyou* (Figure 3) are unique. The coloration of *Idiostatus siskiyou* is also fairly distinctive. In his original description Hebard (1934 p. 49) writes: “General coloration very dull cinnamon buff with numerous microscopic and inconspicuous flecks of dark brown on all but dorsum of head, lateral lobes of pronotum and limbs.” Many shield-backed species show color or color pattern variations, however, and *Idionotus siskiyou* is no exception. Figure 4 provides examples of the color



Figure 4a: Female *Idionotus siskiyou* found on Eight Dollar Mountain Road in Josephine County Oregon on 2012 September 04–05. Note the redder color and the pale broad stripe down its back. Photo by Ron Lyons.

Figure 4b: Female *Idionotus siskiyou* found on Eight Dollar Mountain Road in Josephine County Oregon on 2012 Septmber 13–14. Note the greyish color and the pale broad stripe down its back. On the abdomen the slightly darker chevrons are part of the diamond-shape pattern. Photo by Ron Lyons.



variation found in this species. Both exhibit a broad paler stripe down their backs; some individuals like the ones in Figure 2 and Figure 4b also have a faint, open diamond pattern on top of their abdomens. (The only other local species that I have seen with similar colors are *Idiostatus inermis* [Unarmed Shieldback] which overlaps *Idionotus siskiyou* at least in Siskiyou County, California, and some individuals of *Neduba*.)

The shape of the pronotal shield of *Idionotus siskiyou* is fairly distinctive (Figure 5) compared to other local species. While females are often harder to identify, the combination of color pattern and shield shape allow one to identify these females with confidence. As indicated earlier the cerci of the males are unique.

Our katydids are interesting insects deserving of more study.

References

- Capinera, J.L., R.D. Scott, and T.J. Walker. 2004. Field Guide to the Grasshoppers, Katydid, and Crickets of the United States. Cornell University Press, Ithica N.Y. 249 p.
- Hebard, M. 1934. Studies in Orthoptera which occur in North America north of the Mexican boundary. III. Revisionary data and new North American Decticinae. Transactions of the American Entomological Society 60: 31–54.
- Lyons, R.W. 2011. Wanted: Observations of *Capnobotes* (Orthoptera: Tettigoniidae) in Oregon. Bulletin of the Oregon Entomological Society 2011(2, Summer) : 9–10.
- Lyons, R.W. 2012. *Tessellana tessellata* in Oregon (Orthoptera: Tettigoniidae). Bulletin of the Oregon Entomological Society 2012(3, Fall): 5–6.
- Rentz, D.C. and Birchim, J.D. 1968. Revisionary Studies in the Nearctic Decticinae. Memoirs of the Pacific Coast Entomological Society 3: 173 p.



Figure 5: Dorsal views of the shields of flightless shield-backed katydids from southern Oregon. From Left to Right: *Idionotus siskiyou* (female. Note the shape of the top of the shield—noticeable constriction, raised edge along the posterior lateral margins, curve at the corner of this margin); *Idiostatus gurneyi* (female, Mount Ashland, Jackson County, Oregon. Note the lack of a sharp edge at the waist of the shield and its overall shape; the shield of this species has a central ridge, but the other local *Idiostatus* species do not.); *Steiroxys* probably *borealis* (male, Lava Beds National Monument, Siskiyou County, California. While not obvious at this angle, the shield has a central ridge and the top of the shield bends down sharply at the edges.); *Neduba* sp. (female, Forest Road 13, Siskiyou County, California. Note the shape of the shield and the broad flared posterior margin.) The colors/color patterns shown are not unique for each species.

Journal of Orthoptera Research

The Journal of Orthoptera Research (JOR) published by the Orthopterists' Society is now available as an open access journal at <<https://jor.pensoft.net/>>. The journal includes papers on the insect order Orthoptera and the related orders Blattodea, Mantodea, Phasmatodea, Grylloblattodea, Mantophasmatodea and Dermaptera.

Pacific Northwest Bumble Bee Atlas

If you want to contribute to our understanding of these hardy native pollinators, consider participating in this citizen science project to atlas our species. For more information, please visit <<http://pnwbumblebeeatlas.org>>.

Thesis on Oregon Pseudoscorpions

Benedict, E.M. 1978. A biogeographical study of currently identified Oregon pseudoscorpions with an emphasis on western Oregon forms. 143 p.

This older PhD thesis from Portland State University can be accessed at <https://pdxscholar.library.pdx.edu/open_access_etds/845/>.

Nature Photographers of the Pacific Northwest

The fall meeting of the group will be held Saturday, November 3 in the Corbet Theater of Centralia College in Centralia, Washington. For more information please visit their website at <<https://www.nppnw.org/>>.

Butterfly Blitz at Oregon Caves – 2018 *Ron Lyons*



Along the first part of the trail it is a case of follow the leader. Photo by Ron Lyons.

On Saturday June 30, 15 people—volunteers and Park Service personnel—gathered at the Oregon Caves National Monument and Preserve to conduct a butterfly survey of the Bigelow Lakes area. The participants were divided into 4 groups under the leaders Gary Pearson, Dana Ross, Rob Santry, and Joseph Smith. Each area was surveyed for about 5 hours.

The weather was sunny and mild with a light breeze in the mid-70s to low 80s, depending on where you were.

The lower trail that I was on featured a number of butterfly species including Lorquin's Admiral, California Sister, California Tortoiseshell (some would land on people's sweat covered skin and

clothes), American Lady, Cedar Hairstreak, Hoffman's Checkerspot, and several species of blues.

Other finds included the non-native shield-backed katydid, *Tessellana tessellata*, some day-flying moths including one of the fairy moths (*Adelis* sp.), and a stonefly.

Dinner afterwards featured pizza in Cave Junction where it was in the 90s at 6:00 pm.



Lycaena nivalis (Lilac-bordered Copper) on the lower trail. Photo by Ron Lyons.



Nets, cameras, binoculars and clipboards ready, the 15 volunteers and Park Service personnel pose for a group shot at the Bigelow Lakes trailhead prior to beginning the day's count. Photo by Ron Lyons.

40th Northwest Lepidopterists' Workshop

When: Saturday and Sunday, 13 and 14 October 2018

Where: Cordley Hall, Oregon State University, Corvallis, Oregon

Hosts: Drs. Paul Hammond and David McCorkle

Sponsored by the Oregon State Arthropod Collection and the Oregon State Department of Integrative Biology

Saturday Program, 13 October

9:00 AM Register at Cordley Hall, room 2113 (east wing). No fee.

Workshop Preview: Arrange study specimens, etc. Cordley Hall room 1070 (west wing)

10:00 Welcome and announcements, Cordley Hall room 2113 (east wing)

Drs. David Maddison and Christopher Marshall

10:30 Activity reports: new state and county records, meeting reports, book announcements, etc.*

12:30 PM Group picture. Location to be announced

12:45 Lunch at local restaurant

2:00 Workshop session: Cordley Hall room 1070. (Preceded by a brief orientation to this year's groups if requested.)

Groups of emphasis for this year:

▶ Butterflies: *Phyciodes*, *Chlosyne* and Hesperidae (skippers)

▶ Moths: Sphingidae

Also specimens of any Lepidoptera from recent field trips or of special interest.

Information exchange and specimen gift exchange is encouraged.

4:00–4:45 Oregon State Arthropod Collection Open House (Cordley 4082).

Hesperidae, Sphingidae and newly acquired specimens of interest will be on display.

NOTE: Please contact Chris Marshall (<Christopher.marshall@oregonstate.edu>) if you want to use the collection before or after the meeting. The collection will not be available for research Friday, Saturday or Sunday.

5:00 Workshop session conclusion

5:30 Dinner at the Izzy's Restaurant, 2475 NW 9th, Corvallis.

7:15 Evening session: Ag Life Science Building (ALS) room 4001

Brief planning session followed by the evening lecture:

Keynote Speaker: Dana Ross

“Documenting Lepidoptera Biodiversity in the Pacific Northwest: Reflections on the Past 24 Years”

9:30 Meeting recessed until Sunday morning

*Please bring your NW collecting records with you in written form. Dana Ross will put them into a master file and send any significant county records to Jon Shepard for inclusion in the Lepidopterists' Society Season Summary (include state, county, location and date, and if available, range & township or lat/long coordinates as well as elevation). Ann Potter is also soliciting records especially for Washington.

Program continued next page...

Program continued...

Sunday Program, 14 October

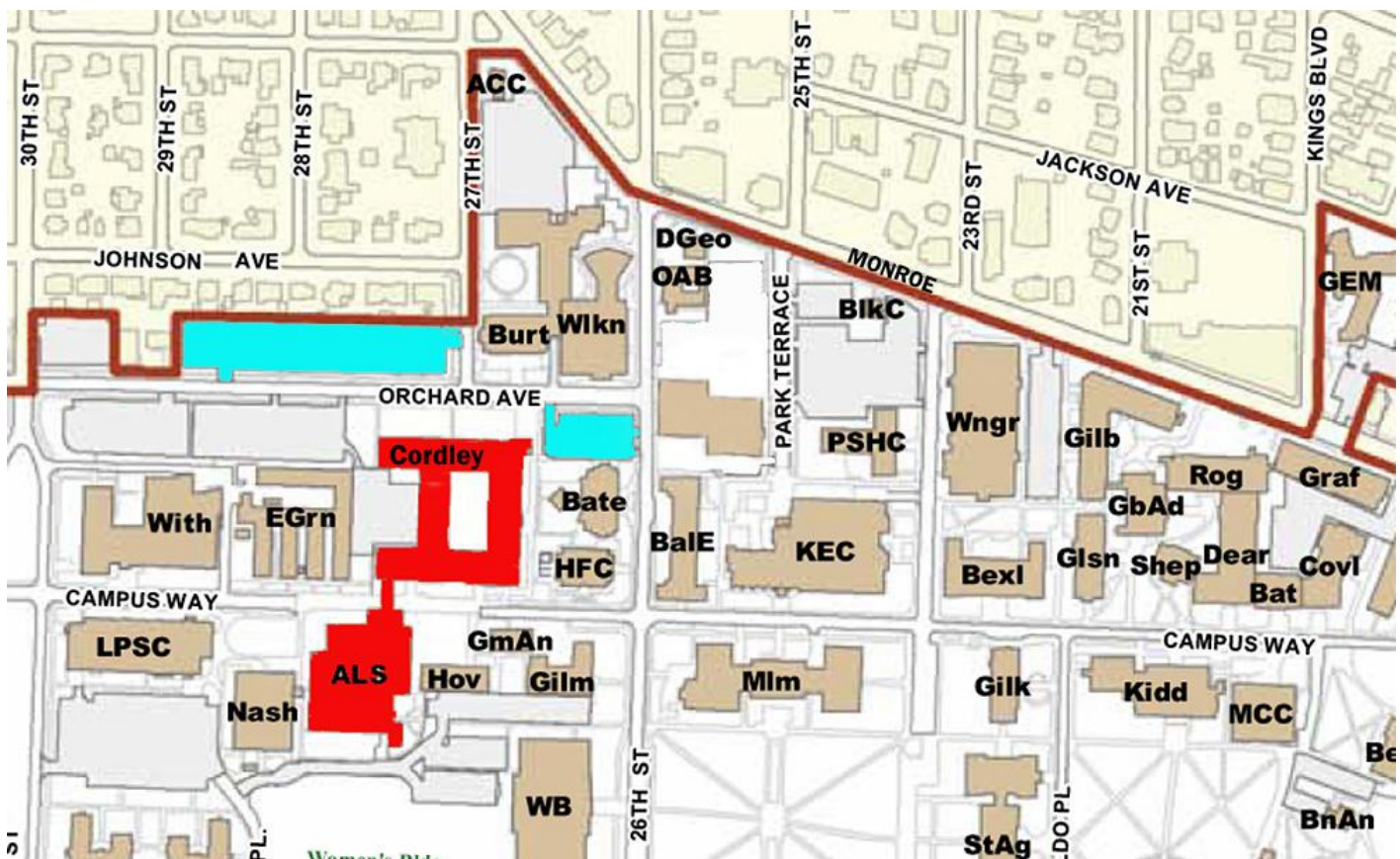
8:30 AM Workshop session resumed, Cordley Hall room 1070 (west wing)

10:00 Field trip reports and other contributions. PowerPoint, etc. Cordley Hall room 2113 (east wing)

This is your opportunity to contribute a presentation on or related to Lepidoptera, e.g. field trip report, favorite images, etc.. (Please notify Paul Hammond prior to this meeting of your equipment needs and if your presentation is likely to exceed 10 minutes.)

“12:00” Meeting concluded

The map below shows Cordley Hall and the ALS Building in red. Most of the meeting takes place in Cordley Hall. Enter this building through the weekend entrance—the entrance closest to the small parking lot colored in turquoise. The Saturday evening presentation in Ag 4001 is on the 4th floor of the ALS building, reached from the 3rd floor of Cordley Hall via a sky bridge.



The smaller of the two parking areas colored in turquoise is the one favored by participants as it is the one closest to the weekend entrance for Cordley Hall (access this lot via Orchard Ave). This smaller lot has some handicapped parking spots. Street parking is also available along Orchard Ave.

Visit <http://transportation.oregonstate.edu/parking/maps> for a full campus map with the parking areas marked. You can download this map as a PDF, if desired.